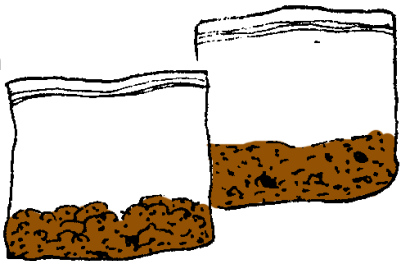
Investigation

Decomposition in a Bag

Investigate the role of temperature in decomposition.

What You Need



- 12 zipper-locking plastic bags, or clear plastic soda bottles with
- thumbtack for making small holes in the bags or bottles
- heating pad
- several thermometers
- measuring cup and water
- 6 half-gallon milk cartons cut in half lengthwise to make trays
- several large paper grocery bags
- variety of organic items from each category below to put into the decomposition bags
- 1-2 cups of rich garden or forest soil to provide a variety of decomposers and scavengers (bacteria, fungi, earthworms, isopods)

Moist Items	Dry Items
carrot	uncooked beans
apple	uncooked pasta
lettuce or spinach	popped popcorn
natural bread	unpopped popcorn
cooked pasta	matzo cracker
grass clippings	dead leaves

Getting Started

1. State your hypothesis about the effect of temperature on decomposition.
2. Outline an experiment to test your hypothesis. Sketch your setup.
3. List the factors that you will control in your experiment.
4. Monitor your experiment over a two-week period. Keep a daily log.

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Describe Your Results and Conclusions

If Earth's climate warms, what do you predict will happen to the rate of decomposition in the temperate forests of the world? How might this affect the level of CO_2 in the atmosphere?